

AMENDMENTS TO THE DRAWINGS

Kindly replace the originally-filed drawings with the the 10 pages of replacement drawings submitted concurrently with this response. Annotated sheets showing the amendments to the Figures are attached to this response. The amendments to the Figures are also described in the Remarks section below.

REMARKS

Applicants appreciate the Examiner's thorough review of the application. Reconsideration and allowance of all claims are requested.

Applicants note that the cover sheet of the Office Action indicates that claims 1 - 25 have been rejected. The Office Action, however, indicates that claims 1 - 16 and 18 - 25 have been rejected and claim 17 has been withdrawn. Appropriate correction is requested.

New claims 26 - 36 are patentable over the cited references. Support for the new claims may be found at, for example, Figs. 9 and 11 - 16 and paragraphs 0030, 0065 - 0080. No new matter has been added by the amendments.

Interview

Applicants further appreciate the personal interview granted May 14, 2008 with Applicants' representative. Applicants' representative explained that it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the center louver support in a door, as found in Escudero Ribas, with a corner connector, as found in the screen windows of White, Guillemet or Silverman. The Examiner agreed to consider the arguments in favor of patentability with any submitted claim amendments. Applicants' representative and the Examiner also discussed various informalities raised in the Office Action.

Election/Restrictions

In response to the Election/Restriction Requirement, Applicants elect Group I (i.e., claims 1 - 16 and 18 - 25). Claim 17 has been withdrawn from consideration. Applicants reserve the right to pursue the withdrawn claim in a divisional application. Applicants elect the Species as indicated in the Response to Restriction Requirement filed September 12, 2007.

Information Disclosure Statement

Applicants note that the Information Disclosure Statement submitted February 7, 2005 should have read 6,536,174 to Foster et al. This reference, however, has been considered by the

Examiner and cited in the Office Action. Therefore, the reference has been properly considered and is not being submitted in a supplemental Information Disclosure Statement.

Drawings

Applicants submit replacement drawings with corrections generally as suggested at pages 5 - 9 of the Office Action and the Notice of Draftsperson's Patent Drawing Review. The Figures have been reorganized so that they appear in numerical order. In compliance with 37 CFR § 1.121(d), drawing sheets that do not include all of the Figures presented on an immediate prior version are labeled "New Sheet". However, no new Figures are being added by the amendments. No new matter has been added by the amendments.

Objections Under 37 C.F.R. § 1.83(a).

Regarding the comments (1) and (2) on page 4 of the Office Action, Applicants submit that the "pair of third secondary rails" and "pair of fourth secondary rails" in claim 5 are disclosed in the specification and figures. For example, Paragraph 0073 refers to FIG. 16, wherein "two lateral support rails are inserted into the channel guide 34 of the upper perimeter rail 16, the left labeled as 106A, the right labeled as 106B." Paragraph 0075 describes a "structure identical to the example described in reference to FIG. 16 is formed at the lower end of the center louver-support member 82, with another center lateral support member 90 having a portion 90C between another pair of lateral support rails 106A and 106B within the channel 34 of the lower perimeter rail 18." Therefore, the drawings and specification show the "pair of third secondary rails" and "pair of fourth secondary rails" as described in claim 5. The pair of fourth secondary rails is structurally identical to the pair of third secondary rails as shown as elements 106A and 106B.

Regarding the comments (1) to (13) on pages 5 - 7 of the Office Action, Applicants have made the following amendments.

(1) Region "3" in Fig. 1 has been relabeled as "2/3" as suggested by the Examiner.

(2) Applicants note that there was no arrow at the end of lead lines leading from reference numeral "3" in Fig. 1. As such no amendment has been made. Clarification is requested.

(3) The "box" in Fig. 2 has been deleted, and line breaks are shown on the top and left-hand side of the shutter.

(4) The arrows at the ends of lead lines for reference numerals "26" and "34" in Fig. 3 have been deleted.

(5) The arrows at the ends of lead lines for both occurrences of reference numeral "24E" in Fig. 4 have been deleted.

(6) The arrows at the ends of lead lines for reference numerals "24C", "24D" and "24E" in Fig. 5 have been deleted.

(7) The arrow at the end of the lead line for reference numeral "34" in Fig. 6 has been deleted.

(8) The arrow at the end of the lead line for reference numeral "36" in Fig. 7 has been deleted.

(9) The left-most occurrence of reference numeral "54" in Fig. 9 has been corrected to read "55", which is consistent with amended paragraph 0066 of the specification.

(10) The left-most occurrence of reference numeral "82" in Fig. 11 has been deleted.

(11) The arrow at the end of the lead line for reference numeral "104" in Fig. 12 has been deleted.

(12) The arrow at the end of the lead line for reference numeral "96" in Fig. 14 has been deleted.

(13) The Fig. 15 appearing on the same sheet as Fig. 16 in the original drawings has been deleted, as it was a partial duplicate of the Fig. 15 with more reference numerals, which appeared on the last sheet of the original drawings. The Fig. 15 with more reference numerals, which appeared on the last sheet of the original drawings, has been kept and added to the sheet with Fig. 16, as suggested by the Examiner.

Objections Under 37 C.F.R. § 1.84(p)(4).

Regarding comment (1) at the first paragraph on page 8 of the Office Action, Applicants believe the Examiner is referring to Fig. 9 and not Fig. 6. As such, the left-most occurrence of reference numeral "54" in Fig. 9 has been corrected to read "55" to represent the "aperture through corner connector 24", which is consistent with amended paragraph 0066 of the specification. The right-most occurrence of reference numeral "54" correctly identifies the "latch pin receiver".

Objections Under 37 C.F.R. § 1.83(p)(5).

Regarding the comments (1) and (2) on page 8 of the Office Action, Applicants have made the following amendments.

(1) Reference numeral "11" has been added to Fig. 11 to comply with the Examiner's requirements that the drawings show a "shutter" as in paragraph 0068 of the specification.

(2) Reference numeral "114" has been added to Fig. 18 to comply with the Examiner's requirements that the drawings show a "hinge member" as in paragraph 0081 of the specification.

Additionally, the two extraneous lead lines surrounding reference numeral "96" in Fig. 16 have been removed.

Furthermore, Applicants have added Arabic numeral sheet numbering to the drawing sheets as required in the September 4, 2008 Notice of Non-Compliant Amendment.

No new matter has been added by the amendments. Withdrawal of the drawing objections is requested.

Specification

Applicants have amended the specification as suggested at pages 9 - 10 of the Office Action. A new title has been supplied as discussed in the personal interview of May 14, 2008 to provide more description of the invention.

Applicants note that in paragraph 0067 the numeral "50" has been changed to "54" and not "52" as suggested in the Office Action. The "latch pin receiver" is indicated by numeral 54. No new matter has been added by the amendments. Withdrawal of the objections is requested.

Claim Objections

Applicants have generally been amended the claims to address the claim objections raised at pages 10 - 11 of the Office Action. No new matter has been added by the amendments.

Applicants note that the limitation "a respective four sides" in claim 1 has not been amended as suggested by the Examiner, but has instead been alternatively amended to show that one longitudinal rail member is located on each side of the rectangular frame.

Additionally, on page 14 of the Office Action, ll. 4 - 6, Applicants believe the Examiner intended to reference claim 10. As such, Applicants have amended claim 10 as suggested. Appropriate clarification is requested.

Withdrawal of the claim objections is requested.

Claims 1 - 8, 10 - 14, 16, 19 and 21 are patentable under 35 U.S.C. 112, second paragraph.

Applicants have amended the claims to address the rejections under 35 U.S.C. 112, second paragraph raised at pages 11 - 15 of the Office Action. Kindly note that claim 9 has been canceled without prejudice. No new matter has been added by the amendments. Withdrawal of the rejections is requested.

Claims 1 - 3, 11, 15 and 18 - 21 are patentable under 35 U.S.C. 102(b) over Escudero Ribas et al. (U.S. Patent No. 3,638,383).

Claims 1 - 3, 11, 15 and 18 - 21 are patentable over Escudero Ribas. Reconsideration and withdrawal of the rejection are requested.

Independent claims 1 and 15 have been amended to incorporate the subject matter found in dependent claim 9. Kindly note that claim 9 has been canceled without prejudice. No new matter has been added by the amendments.

Regarding the rejection of claim 9, it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine Escudero Ribas with any one of White, Guillemet, or Silverman to create Applicants' invention. At the time of Applicants' invention, it would not have been obvious to utilize an internal sliding latch-pin system that not only passed through a corner connection member, but also through a latch-pin clearance hole to allow the latch-pin to function as a security feature and as an attachment point for wind load testing.

Escudero Ribas discloses a louver door with fixed louver or luffer-boards. C. 1, ll. 3 - 5. Louver doors are assembled by placing laths at right angles within hollow spaces in door stiles. C. 1, ll. 54 - 58. Laths 33, 34, 35 join door stiles 1 with top rails 21 and bottom rails 30. C. 2, ll. 49 - 54. Escudero Ribas does not disclosure the use of the invention for windows, screens or shutters.

In contrast, White, Guillemet and Silverman each disclose use of frame corners for windows. For example, White discloses a corner bracket for retaining a screen frame assembly in a window. C. 1, ll. 6 - 11. Guillemet discloses a corner assembly for an insect screen in a window assembly. C. 1, ll. 1 - 34. Silverman discloses a movable window frames having retaining latches. C. 1, ll. 6 - 8. Each of the corner assemblies disclosed function in a window and allow for movement of the window and/or window screen.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the references as suggested in the Office Action because the corner assemblies as taught in White, Guillemet and Silverman would not function effectively in a louver door as taught in Escudero Ribas. It would not have been obvious to include corner assemblies with locking mechanisms at corners of the louver door in Escudero Ribas.

The window screens of White, Guillemet and Silverman do not function in the same manner as the louver door of Escudero Ribas. A window screen may generally be slid up or down to open a set amount. A louver door may generally be opened laterally to allow passage of air or objects. Corner connections and latch pins would not function in the same manner on window screens or louver doors and it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the cited references.

Locking mechanisms at corners of a louver door would be inefficient because a user would need to either bend over nearly to the floor to reach a locking mechanism at a bottom corner or

would need to reach up above the user's head to reach a locking mechanism at a top corner. A user would likely need to use a ladder or other similar device to reach a top corner of a louver door with a locking mechanism. Additionally, there would be no need for a locking mechanism on a louver door because a louver door does not contain movable parts that would need to be locked as in a window assembly. Therefore, it would not have been obvious to one of ordinary skill at the time of the invention to combine the corner mechanisms of White, Guillemet and Silverman with a louver door as taught by Escudero Ribas.

Independent claim 1 has been further amended to add that "the corner connectors flex for reducing bending and twisting forces applied to said unitary frame". Support for the amendments may be found, for example, at paragraphs 0030 and 0080. No new matter has been added by the amendments. None of Escudero, White, Guillemet or Silverman teaches flexible corner connection members. The corner connections of the present invention flex to provide protection of a window or door from impact during inclement weather. None of the corner members of the cited references disclose the ability to flex and withstand significant impacts, while reducing bending and twisting forces applied to a frame.

Independent claim 15 has been further amended to add that "the latch pin is adapted to pass through a latch pin receiver mounted exterior to the unitary frame, wherein the latch pin receiver mount comprises a camel bracket with two side plates and a through hole in one of the two side plates for receiving an end of the latch pin". Support for the amendments may be found, for example, at paragraphs 0067 and 0080. No new matter has been added by the amendments. None of Escudero, White, Guillemet or Silverman teaches a latch pin adapted to pass through a latch pin receiver as required by the claim. The pins of the cited references are not adapted to pass through a latch pin receiver mounted exterior to the unitary frame.

As amended, independent claims 1 and 15 require a latch pin and corresponding support structures within at least one corner connection member and rail members. Escudero Ribas does not disclose a latch pin or similar structures. Therefore, independent claims 1 and 15 are patentable over Escudero Ribas. Withdrawal of the rejection is requested.

Dependent claims 2 - 3, 11 and 18 - 19 depend from independent claim 1 and add further patentable features to the patentable features of independent claim 1. Dependent claims 20 - 21 depend from independent claim 15 and add further patentable features of independent claim 15.

Therefore, claims 1 - 3, 11, 15 and 18 - 21 are patentable over Escudero Ribas. Reconsideration and withdrawal of the rejection are requested.

Claims 4, 5, 12 - 14 and 16 are patentable under 35 U.S.C. 103(a) over Escudero Ribas (U.S. Patent No. 3,638,383) in view of Matzke (U.S. Patent No. 3,968,738).

Claims 4, 5, 12 - 14 and 16 are patentable over Escudero Ribas in view of Matzke. Reconsideration and withdrawal of the rejection are requested.

Independent claims 1 and 15 are patentable over Escudero Ribas as described above. Dependent claims 4, 5 and 12 - 14 depend from independent claim 1 and add further patentable features to the patentable features of independent claim 1. Dependent claim 16 depends from independent claim 15 and adds further patentable features to the patentable features of independent claim 15.

Therefore, claims 4, 5, 12 - 14 and 16 are patentable over Escudero Ribas in view of Matzke. Reconsideration and withdrawal of the rejection are requested.

Claims 6 - 8 and 22 are patentable under 35 U.S.C. 103(a) over Escudero Ribas (U.S. Patent No. 3,638,383) in view of Matzke (U.S. Patent No. 3,968,738) and further in view of Foster et al. (U.S. Patent No. 6,536,174).

Claims 6 - 8 are patentable over Escudero Ribas in view of Matzke and further in view of Foster. Reconsideration and withdrawal of the rejection are requested.

Independent claim 1 is patentable over Escudero Ribas as described above. Dependent claims 6 - 8 depend from independent claim 1 and add further patentable features to the patentable features of independent claim 1.

Therefore, claims 6 - 8 are patentable over Escudero Ribas in view of Matzke and further in view of Foster.

Independent claim 22 is patentable over Escudero Ribas in view of Matzke and further in view of Foster. Reconsideration and withdrawal of the rejection are requested.

Independent claim 22 has been amended to add that "each of said plurality of louvers is supported by the center louver support rail but is not coupled to the center louver support rail for increasing the strength of said plurality of louvers with respect to airborne objects". Support for the amendment may be found at, for example, paragraphs 0078 - 0079. No new matter has been added by the amendments.

None of the cited references discloses louvers passing through a center support without attachment to the center support. Applicants' invention improves resistance of the overall structure to high energy impacts by evenly distributing load across the louver. The louvers of the cited references do not do this and in fact concentrate force at the attachment points to the center louver, thus reducing overall strength of the window coverings.

Neither Escudero Ribas nor Matzke teach a louver extending through a center support as indicated in the Office Action at pages 30 - 32. Foster has been cited as teaching a center support. However, Foster does not teach a louver passing through a center support but not coupled to the center support as required by the claims.

Foster discloses welding and sealing the flatbars 22 to the central support member 20 for preventing engagement with deteriorating weather conditions and improving aesthetics. C. 3, ll. 19 - 23. This practice is exactly opposite of the Applicants' claim to not coupling the louvers to the central support to allow access to inclement weather for improving strength during hurricanes and other applied forces.

Contrary to the arguments on page 32 of the Office Action, the attachment points in Foster at the center support do not assist in increasing strength of the louvers with respect to airborne objects as required by the claims. In fact, the attachment of the louvers to the center support in Foster decreases the overall strength of the overall structure and reduces the effectiveness of protection.

The cited references, Escudero Ribas, Matzke, and Foster do not teach every element of the claimed invention. Therefore, claims 6 - 8 and 22 are patentable over Escudero Ribas in view of

Matzke and further in view of Foster. Reconsideration and withdrawal of the rejection are requested.

Claim 9 is patentable under 35 U.S.C. 103(a) over Escudero Ribas (U.S. Patent No. 3,638,383) in view of any one of White (U.S. Patent No. 5,450,701), Guillemet (U.S. Patent No. 5,431,211), and Silverman (U.S. Patent No. 6,845,593).

Kindly note that claim 9 has been canceled without prejudice. Withdrawal of the rejection is requested.

Claim 10 is patentable under 35 U.S.C. 103(a) over Escudero Ribas (U.S. Patent No. 3,638,383) in view of any one of White (U.S. Patent No. 5,450,701), Guillemet (U.S. Patent No. 5,431,211), Silverman (U.S. Patent No. 6,845,593) and Figueiredo et al. (U.S. Patent No. 5,549,148).

Claim 10 is patentable over Escudero Ribas in view of any one of White, Guillemet, Silverman and Figueiredo. Reconsideration and withdrawal of the rejection are requested.

Independent claims 1 is patentable over Escudero Ribas as described above. Dependent claim 10 depends from independent claim 1 and adds further patentable features to the patentable features of independent claim 1.

Therefore, claim 10 is patentable over Escudero Ribas in view of any one of White, Guillemet, Silverman and Figueiredo. Reconsideration and withdrawal of the rejection are requested.

Claims 23 - 25 are patentable under 35 U.S.C. 103(a) over Escudero Ribas (U.S. Patent No. 3,638,383) in view of any one of White (U.S. Patent No. 5,450,701), Guillemet (U.S. Patent No. 5,431,211), and Silverman (U.S. Patent No. 6,845,593).

Claims 23 - 25 are patentable over Escudero Ribas in view of any one of White, Guillemet and Silverman. Reconsideration and withdrawal of the rejection are requested.

Independent claim 23, as amended, requires a shutter comprising a rectangular frame structure having a first pair of perimeter rails parallel to and spaced apart from one another, and a second pair of perimeter rails parallel to and spaced apart from one another and perpendicular to

the first pair of perimeter rails, said first pair of perimeter rails secured to said second pair of perimeter rails, wherein at least one of said first pair of perimeter rails includes latch pin guide extending in the direction of said perimeter rail and at least one of said second pair of perimeter rails includes a latch pin clearance hole aligned with said latch pin guide; a latch pin supported by and movable within said latch pin guide, in said direction between an extended position and a retracted position, wherein, in said extended position a distal portion of latch pin extends through said latch pin clearance hole to protrude outward from said frame.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to combine Escudero Ribas with any one of White, Guillemet, or Silverman to create Applicants' invention.

Escudero Ribas discloses a louver door with fixed louver or luffer-boards. C. 1, ll. 3 - 5. Louver doors are assembled by placing laths at right angles within hollow spaces in door stiles. C. 1, ll. 54 - 58. Laths 33, 34, 35 join door stiles 1 with top rails 21 and bottom rails 30. C. 2, ll. 49 - 54. Escudero Ribas does not disclosure the use of the invention for windows, screens or shutters.

In contrast, White, Guillemet and Silverman each disclose use of frame corners for windows. For example, White discloses a corner bracket for retaining a screen frame assembly in a window. C. 1, ll. 6 - 11. Guillemet discloses a corner assembly for an insect screen in a window assembly. C. 1, ll. 1 - 34. Silverman discloses a movable window frames having retaining latches. C. 1, ll. 6 - 8. Each of the corner assemblies disclosed function in a window and allow for movement of the window and/or window screen.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the references as suggested in the Office Action because the corner assemblies as taught in White, Guillemet and Silverman would not function effectively in a louver door as taught in Escudero Ribas. It would not have been obvious to include corner assemblies with locking mechanisms at corners of the louver door in Escudero Ribas.

The window screens of White, Guillemet and Silverman do not function in the same manner as the louver door of Escudero Ribas. A window screen may generally be slid up or down to open a set amount. A louver door may generally be opened laterally to allow passage of air or objects. Corner connections and latch pins would not function in the same manner on window

screens or louver doors and it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the cited references.

Locking mechanisms at corners of a louver door would be inefficient because a user would need to either bend over nearly to the floor to reach a locking mechanism at a bottom corner or would need to reach up above the user's head to reach a locking mechanism at a top corner. A user would likely need to use a ladder or other similar device to reach a top corner of a louver door with a locking mechanism. Additionally, there would be no need for a locking mechanism on a louver door because a louver door does not contain movable parts that would need to be locked as in a window assembly. Therefore, it would not have been obvious to one of ordinary skill at the time of the invention to combine the corner mechanisms of White, Guillemet and Silverman with a louver door as taught by Escudero Ribas.

Independent claim 23 has been further amended to add "L-shaped corner connection members, wherein the L-shaped corner connection members comprise a plurality of longitudinal grooves separated by a plurality of lands on at least one surface of the L-shaped corner connection member, wherein the plurality of lands corresponds to a plurality of grooves within the first pair of perimeter rails and a plurality of grooves within the second pair of perimeter rails". Support for the amendments may be found at, for example, paragraphs 0042 - 0044 and 0080. No new matter has been added by the amendments. None of Escudero, White, Guillemet or Silverman teaches complementary grooves and lands on the corner connection members corresponding to grooves and lands within the frame members for securing the frame members together as required by the claim.


Therefore, independent claim 23 is patentable over Escudero Ribas in view of any one of White, Guillemet and Silverman.

Dependent claims 24 - 25 depend from independent claim 23 and add further patentable features to the patentable features of independent claim 23.

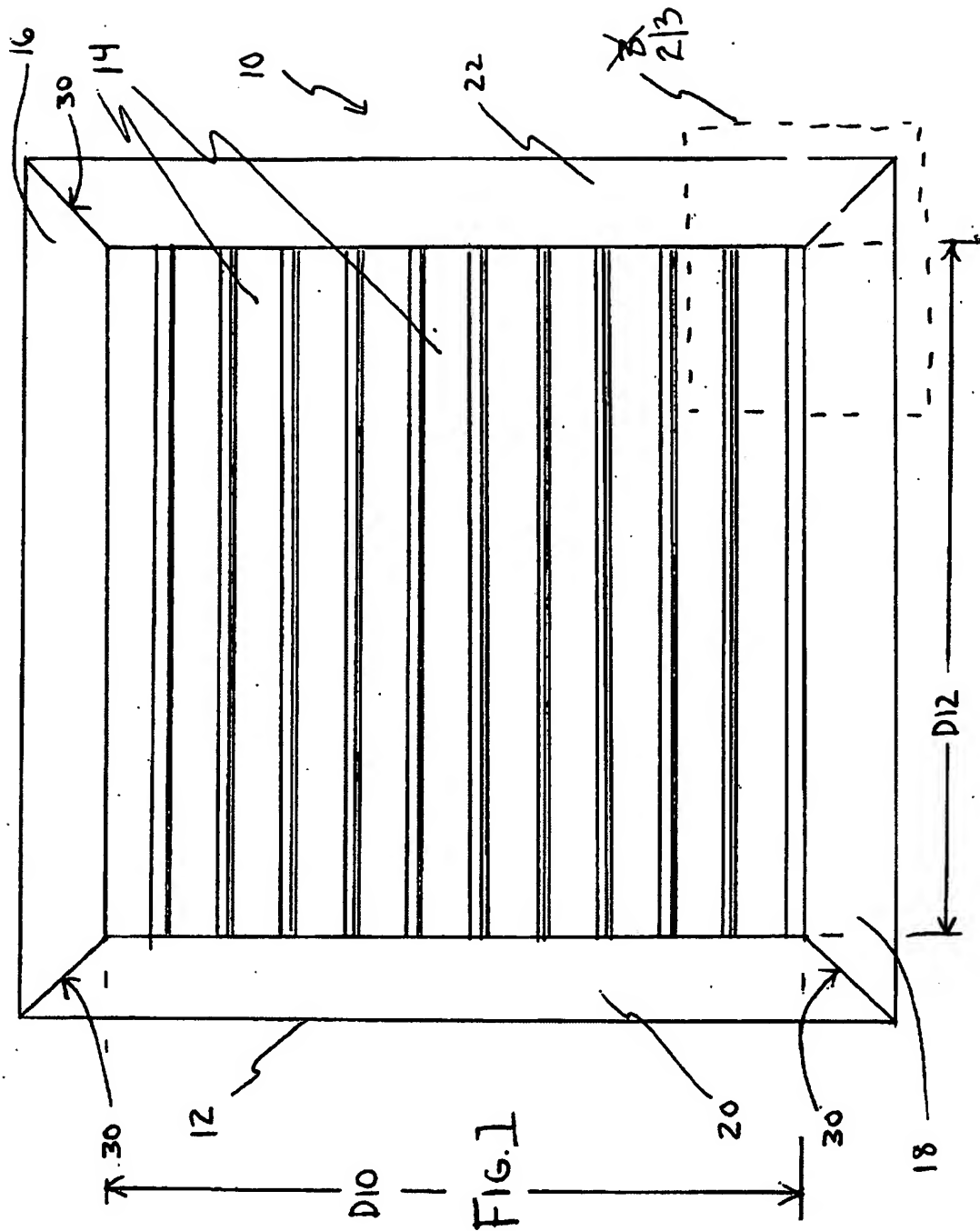
Therefore, claim 23 - 25 are patentable over Escudero Ribas in view of any one of White, Guillemet and Silverman. Reconsideration and withdrawal of the rejection are requested.

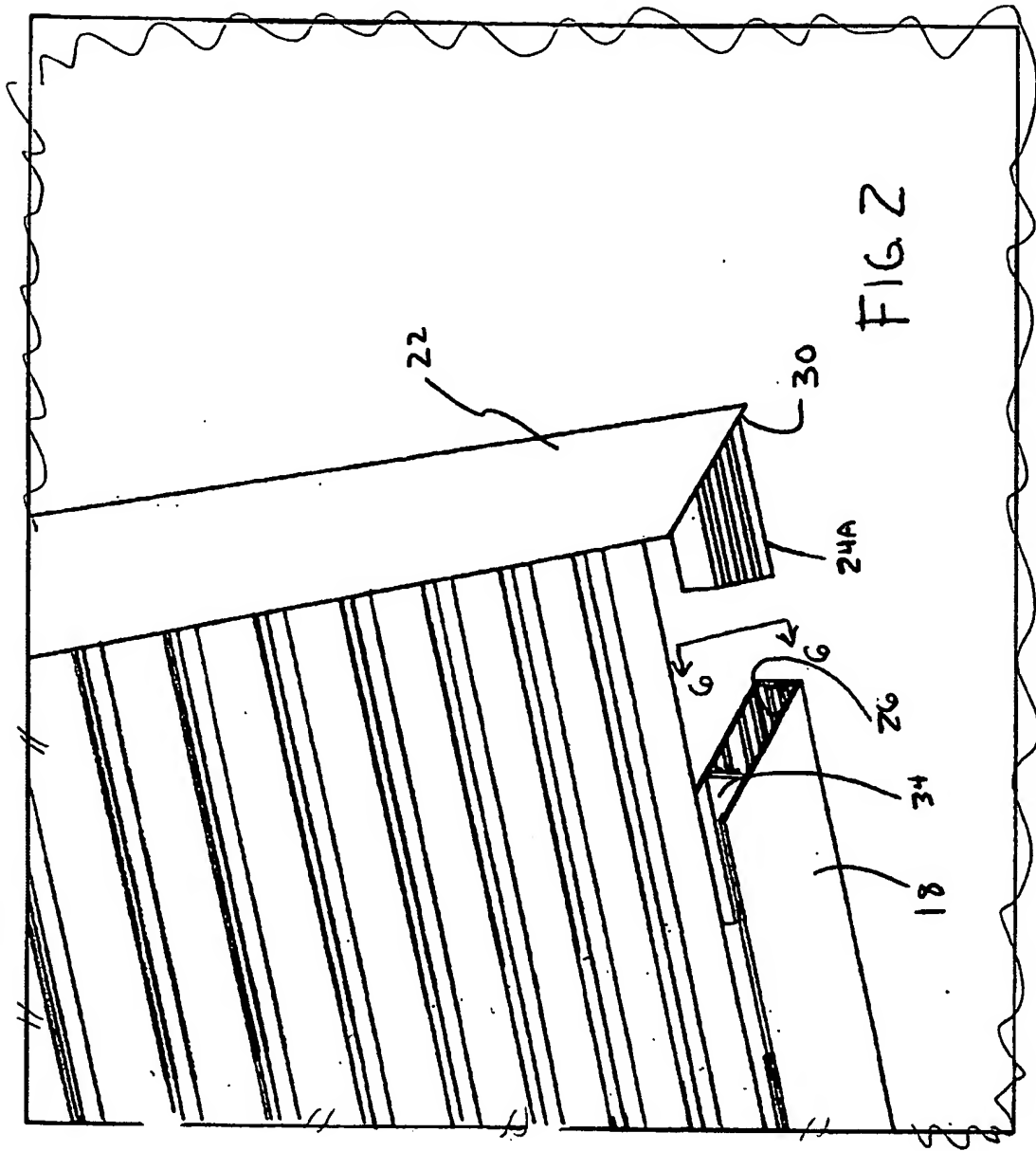
Applicants do not believe that any extension of time is needed with this submission. However, in the event that any extensions of time are necessary to prevent the abandonment of this patent application, then such extensions of time are petitioned. Applicants do not believe that any fees are due in connection with this submission. However, in event that any fees are due, the U.S. Patent and Trademark Office is authorized to charge any fees that may be required in conjunction with this submission to Deposit Account Number 50-2228, under Order No. 021200.0101PTUS from which the undersigned is authorized to draw.

Dated: 9/18/08

By  55,360 for
Michele V. Frank
Registration No.: 37,028
PATTON BOGGS LLP
8484 Westpark Drive, 9th Floor
McLean, Virginia 22102
(703) 744-8000

(703) 744-8001 (Fax)
Attorney for Applicant





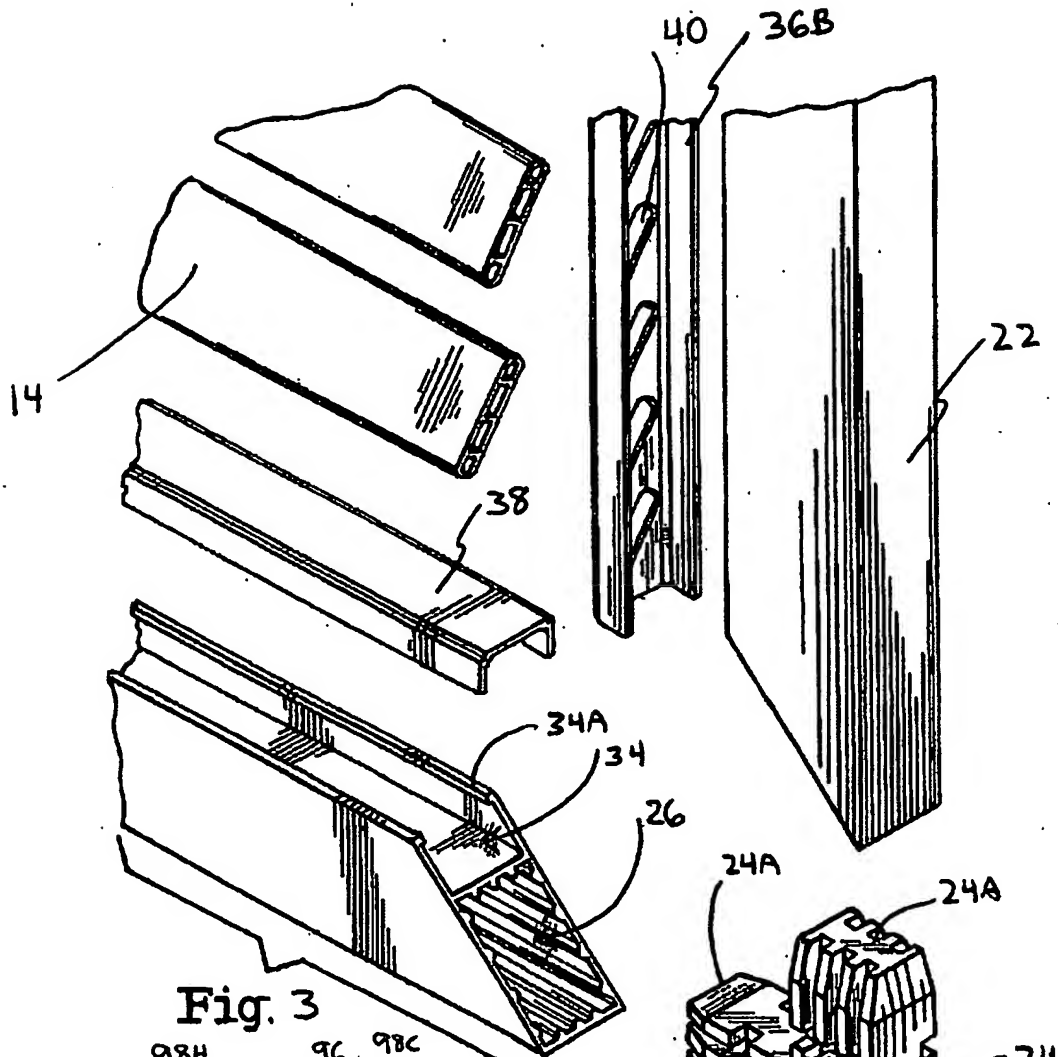


Fig. 3

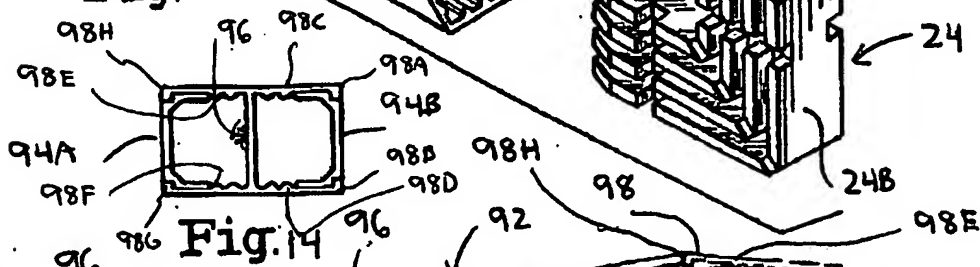


Fig. 14

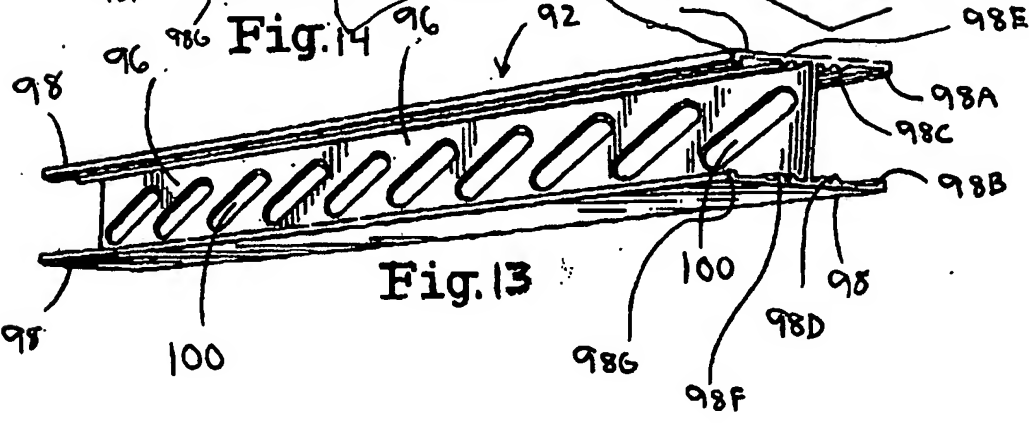


Fig. 13

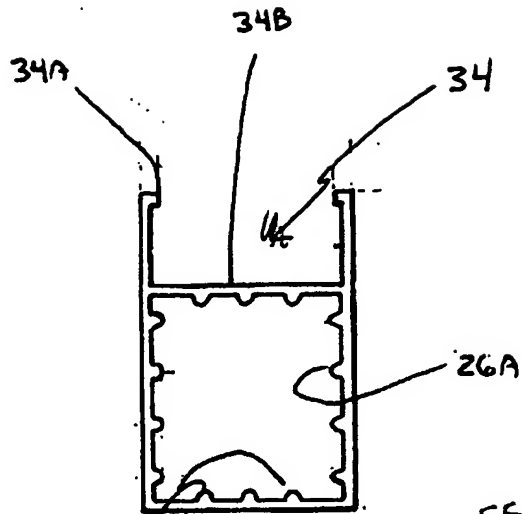


Fig. 6

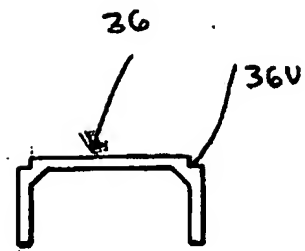


Fig. 7

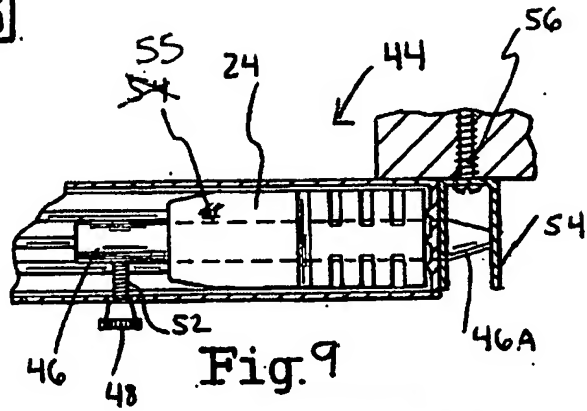


Fig. 9

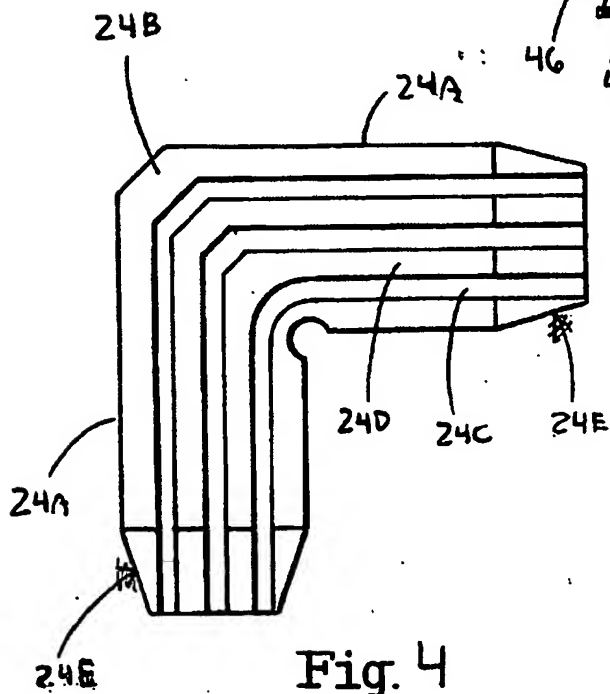


Fig. 4

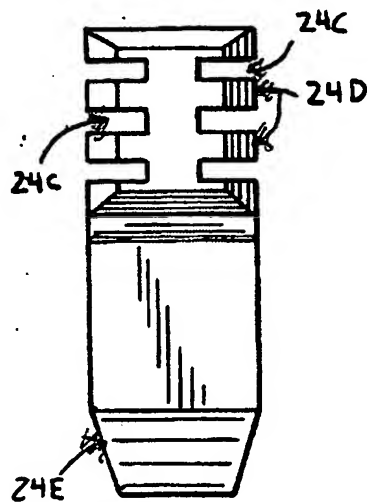


Fig. 5

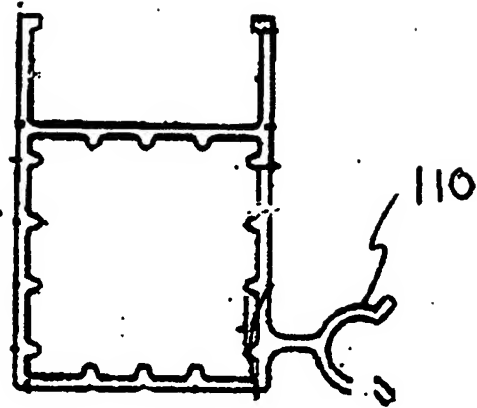


FIG. 17

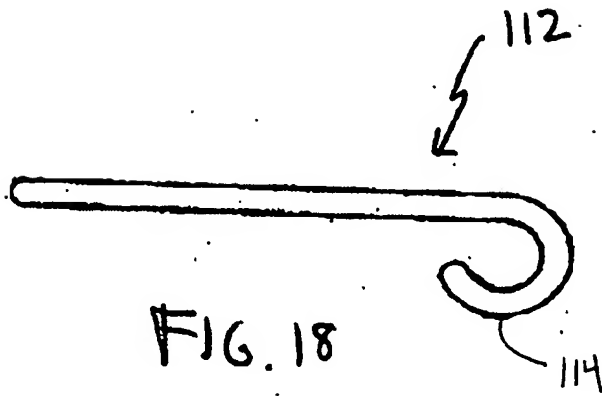


FIG. 18

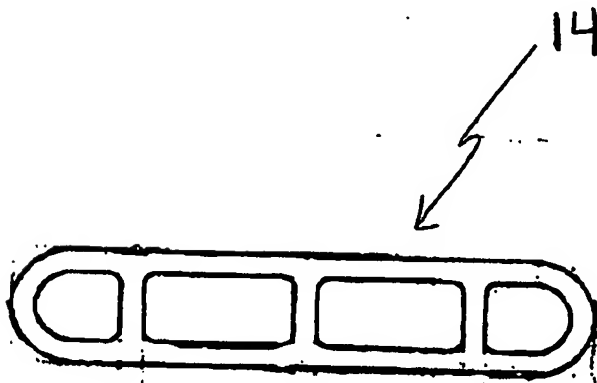


FIG. 8

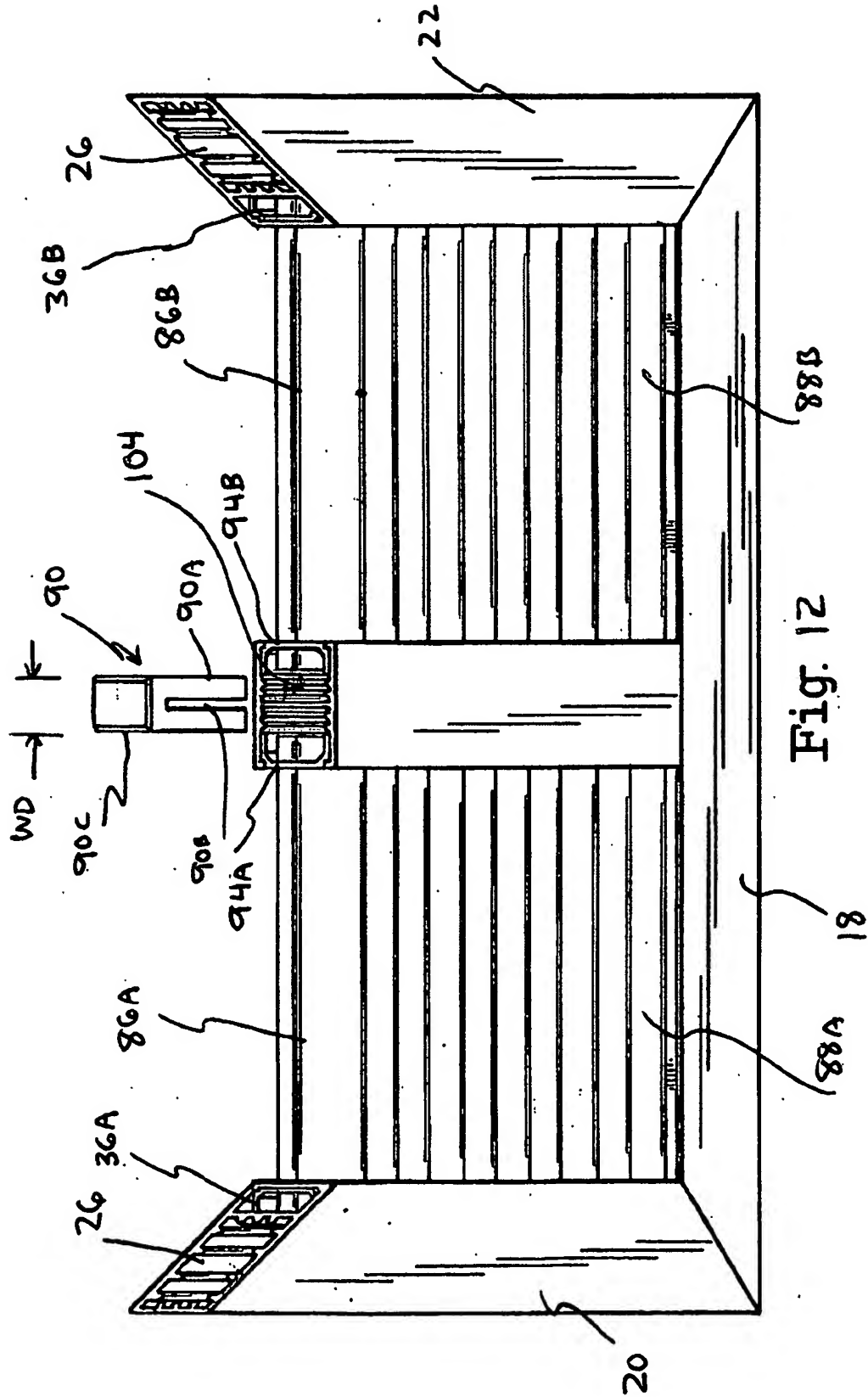


Fig. 15

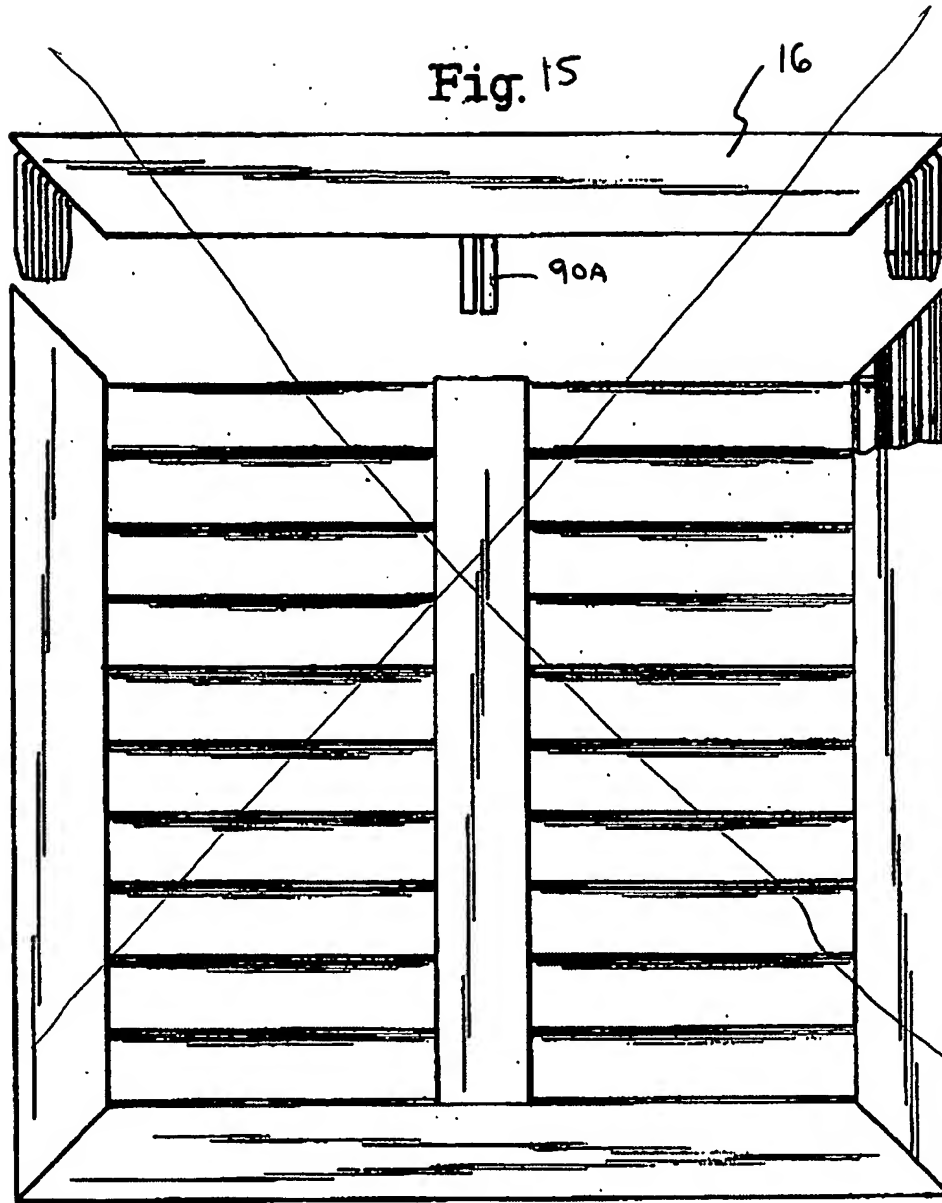


Fig. 16

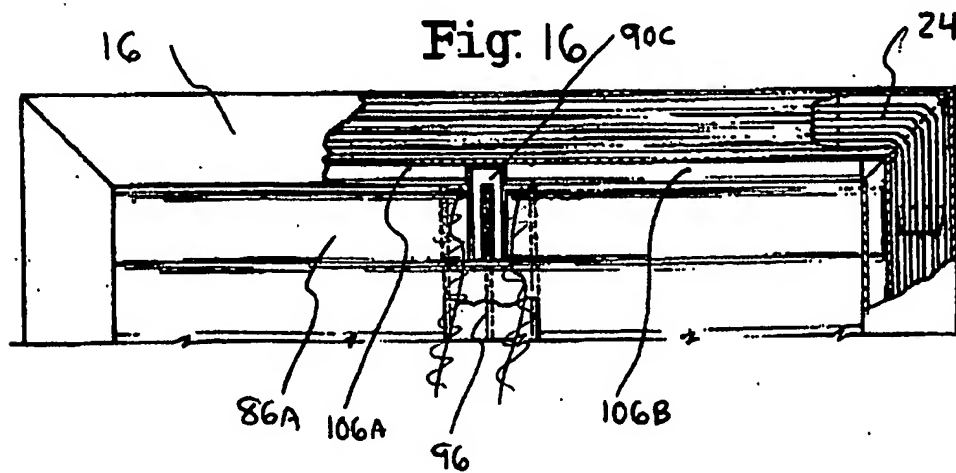


Fig. 15

